AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS:

1. (Previously Presented) A method of maintaining a communication link in a communication network comprising:

initiating, via a master device, unregistration at a controller having a first wireless coverage area, the unregistration being of a dependent in communication with the master device using a communication channel on a frequency band $f_{band}(1)$; and

transmitting a message, using a frequency $f_{band}(2)$, to the dependent indicating to the dependent to register with a network element having a second wireless coverage area, the first wireless coverage area being within the second wireless coverage area, the network element being at a higher level than the master device in a hierarchy of the communication network.

2. (Original) The method of claim 1 comprising the additional steps of:

receiving a registration message from the master device on the frequency band $f_{band}(1)$ indicating the dependent; and

registering the dependent with the master device before the step of unregistering.

3. (Previously Presented) The method of claim 1 comprising the additional step of:

transmitting another message indicating to the network element to register the dependent with the network element via the controller.

4. (Original) The method of claim 1, wherein the dependent is unregistered when an unregistration message is received.

5. (Original) The method of claim 1, wherein the dependent is unregistered when a strength of a signal transmitted between the dependent and the master device on the frequency band $f_{band}(1)$ falls below a threshold value.

6. (Original) The method of claim 5 comprising the additional step of:

monitoring a communication channel associated with the master device on the frequency band $f_{band}(1)$.

7. (Original) The method of claim 6, wherein the communication channel is defined by a frequency hopping sequence.

8. (Original) The method of claim 1, wherein the message is transmitted using a frequency band $f_{band}(2)$.

9. (Previously Presented) The method of claim 1 comprising the additional step of:

transmitting a handoff message to the network element indicating to the network element to communicate directly with the dependent.

10. (Original) The method of claim 9, wherein the handoff message is transmitted on the frequency band $f_{band}(2)$.

11. (Previously Presented) A method for maintaining a communication link comprising the steps of:

searching at a dependent for one or more frequency hopping sequences from a set of frequency hopping sequences;

registering the dependent with a first master device and a controller when a first frequency hopping sequence is detected, the first frequency hopping sequence being associated with the first master device;

continuously monitoring for frequency hopping sequences in the set of frequency hopping sequences;

registering the dependent with one of (1) the controller and (2) a second master device and the controller if the dependent detects a signal transmitted on a second frequency hopping sequence associated with the one of (1) the controller and (2) the second master device & the controller having a higher signal strength than a signal transmitted on the first frequency hopping sequence.

12. (Original) The method of claim 11, wherein the step of registering the dependent with the first master device comprises the step of:

transmitting a registration message to the first master device using the first frequency hopping sequence.

13. (Original) The method of claim 11, wherein the step of registering the dependent with the second master device comprises the step of:

transmitting a registration message to the second master device using the second frequency hopping sequence.

14. (Original) The method of claim 11, wherein the set of frequency hopping sequences use a first frequency band $f_{band}(1)$.

15. (Original) The method of claim 14 comprising the additional step of:

searching for a signal transmitted using a second frequency band $f_{band}(2)$ if no frequency hopping sequence in the set are detected.

16. (Original) The method of claim 15 comprising the additional step of:

registering with a communication network when the second frequency band $f_{band}(2)$ is detected, the communications network being associated with the second frequency band $f_{band}(2)$.

17. (Original) The method of claim 11 comprising the additional steps of:

receiving a registration message indicating the dependent to register with a communications network; and

registering with the communication network using a second frequency band $f_{band}(2)$.

18. (Previously Presented) A method for maintaining a communication link in a communication network comprising:

receiving a first registration message at a first master device from a dependent over a first frequency hopping sequence associated with the master device, the first master device having a first wireless coverage area;

transmitting a second registration message from the first master device over a second frequency hopping sequence associated with a second master device having a second wireless coverage area, the first wireless coverage area being within the second wireless coverage area, the second master device being at a higher level than the first master device in a hierarchy of the communication network;

monitoring a strength at the first master device for a signal transmitted by the dependent over the first frequency hopping sequence; and

transmitting an unregistration message over the second frequency hopping from the first master device to the second master device sequence if the strength of the signal transmitted over the first frequency hopping sequence falls below a threshold value.

19. (Original) The method of claim 18, wherein the first and second frequency hopping sequences are part of a set of frequency hopping sequences on a same frequency band.